

Remarks/Arguments:

Claim 1 has been amended. No new matter is introduced herein. Claim 1 is pending.

Claim 1 has been amended to clarify that the IC card adapter apparatus conducts polling when not in communication with the IC card. No new matter is introduced herein. Support for the amendment can be found, for example, at page 20, lines 1-9 of the original specification.

Claim 1 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Fischer et al. (US 5,552,641) in view of Proske et al. (US 4,595,902). It is respectfully submitted, however, that this claim is patentable over the cited art of record for the reasons set forth below.

Claim 1, as amended, includes features neither disclosed nor suggested by the cited art, namely:

... wherein the IC card adapter apparatus, when not in communication with the IC card, conducts polling to the IC card which comes close to the IC card adapter apparatus, and when an external radio wave accessing the IC card is detected responsive to the polling, an interfering wave is output from the IC card adapter apparatus such that data output from the IC card is transmitted together with the interfering wave.
(Emphasis added)

Applicants' claim 1 relates to an IC card adapter apparatus which conducts polling to an IC card and outputs an interfering wave when an external radio wave accessing the IC card is detected. As described at page 20, lines 1-9 of the subject specification, the IC card apparatus conducts polling when it is not in communication with the IC card and detects the external radio wave responsive to the polling. As described in the subject specification, at page 20, lines 5-11, an interfering wave is output when it is determined that an apparatus accesses the IC card without authorization. The claimed IC card adapter apparatus outputs the interfering wave such that data output from the IC card is transmitted together with the interfering wave. Because the interfering wave is transmitted together with the data from the IC

card, the interfering wave prevents the unauthorized device from receiving the data output by the IC card, causing the data not to be normally received by the unauthorized device.

Fischer et al. disclose, in Fig. 1, a keyless remote-control access control device. The device includes stationery transmitter and receiver unit 1 disposed in motor vehicle 4 and portable transponder 2 located away from motor vehicle 4. Operation of door handle 45 causes unit 1 to begin a question and answer dialogue with transponder 2. (Column 4, lines 1-15). As shown in Fig. 2, during the question and answer dialogue, unit 1 transmits a question code signal and transponder 2 replies to the question code signal with an answer code signal. Unit 1 compares the answer code signal with an expected command code signal in order to unlock vehicle 4. (Column 4, lines 15-31).

Fischer et al. describe that errors may occur during communication between unit 1 and transponder 2. One error may be caused by interference by a stronger interfering transmitter broadcasting in the general vicinity of vehicle 4. (Column 5, line 66-Column 6, line 6). Fischer et al. teach that unit 1 repeatedly transmits a question code signal if no answer code signal is received in response to the initial transmission. (Abstract and col. 7, lines 23-31.) Fischer et al. also address the problem of an interference signal by having transponder 2 simultaneously transmit the answer code signal over various transmission channels. By transmitting the answer code signal over various transmission channels, transponder 2 insures that the answer code signal can be received by at least one of the transmission channels of unit 1. (Col. 7, lines 46-64).

Fischer et al., however, do not disclose or suggest that an IC card adapter apparatus conducts polling to an IC card when not in communication with the IC card, as required by claim 1 (emphasis added). Fischer et al. are silent regarding this feature. Fischer et al. only teach that unit 1 repeatedly transmits a question code signal to transponder 2 if no answer code signal is received in response to an initial transmission. (Abstract.) Thus, repeated transmission of the question code signal in Fischer et al. occurs during communication with the IC card. In addition, as acknowledged by the Examiner on page 3 of the Office Action, Fischer et al. do not

teach that data output from the IC card is transmitted together with the interfering wave, as required by claim 1.

The Examiner asserts, on page 3 of the Office Action, that Fischer et al. teach conducting polling to an IC card and detecting an external wave accessing the IC card responsive to the polling, based on the Abstract and col. 5, line 66 - col. 6, line 6. In particular, it is asserted that a "repeated question code is a form of 'polling' and an interfering transmission received on a transponder antenna represents a form of 'accessing.'" Applicants respectfully disagree.

As discussed above, Fischer et al. do not teach that unit 1 conducts polling to transponder 2 when not in communication with transponder 2. At col. 5, line 66 - col. 6, line 6, Fischer et al. teach that if a vehicle is not unlocked by an authorized user, there may be interference from a stronger interfering transmitter that is in the general vicinity of vehicle 4. Although Fischer et al. may receive an interfering transmission, there is no teaching in Fischer et al. to detect the interfering transmission responsive to polling and output an interfering wave from unit 1, such that data output from the IC card is transmitted together with the interfering wave, as required by claim 1. Thus, Fischer et al. do not include all of the features of claim 1. Fischer et al. only teach that, if there is interference in the transmission path, transponder 2 is brought close to vehicle 4, the tripping means is actuated and an answer code signal is transmitted again. (Col. 7, lines 23-31.)

Proske et al. disclose, in Fig. 3, an anti-theft device including transmitter 10' located at approximately the same site as receiver 2 in vehicle 1. (Col. 4, lines 52-55.) The user of the vehicle sends a code signal to receiver 2 via transmitter 8. (Col. 3, lines 34-50.) Transmitter 10' transmits a jamming signal simultaneously with the code signal which is sent by transmitter 8. (Col. 4, lines 52-61.)

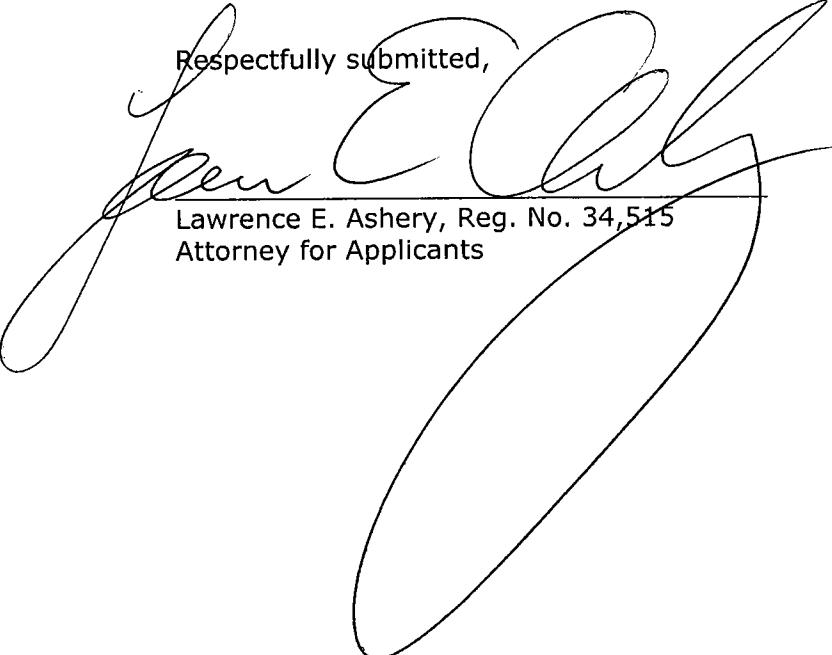
Proske et al., however, do not teach that an IC card adapter apparatus conducts polling to an IC card when not in communication with the IC card and detects an external radio wave accessing the IC card responsive to the polling, as required by claim 1. Proske et al. are silent regarding these features. Thus, Proske et al. do not make up for the deficiencies of Fischer et al. with respect to claim 1. Accordingly, allowance of claim 1 is respectfully requested.

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In view of the amendments and arguments set forth above, the above-identified application is in condition for allowance, which action is respectfully requested.

Respectfully submitted,


Lawrence E. Ashery, Reg. No. 34,515
Attorney for Applicants

DMG/fp

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P.O. Box 980
Valley Forge, PA 19482
(610) 407-0700

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